

Facts Regarding the Proposed Permit for Arizona Clean Fuels Yuma, LLC

For more information regarding the ACF Refinery go to: www.azdeq.gov

Pursuant to Arizona Administrative Code (A.A.C.) Title 18, Chapter 2 and Arizona Revised Statutes, Title 49, Chapter 3, the Arizona Department of Environmental Quality (ADEQ) is proposing to issue a Class I Prevention of Significant Deterioration (PSD) air quality permit to Arizona Clean Fuels Yuma, LLC (ACF).

OVERVIEW OF THE ACF FACILITY

ADEQ is proposing to issue a Class I / Title V Permit No. 1001205 for the proposed ACF refinery, a major stationary source of air pollution. The proposed refinery would be located on an approximately 1,450-acre site, 40 miles east of Yuma, near the community of Tacna, in Yuma County. The proposed refinery would have a crude oil atmospheric distillation capacity of approximately 150,000 barrels per day (BPD). It is expected to produce approximately 150,000 BPD of motor fuels, including approximately 85,000 BPD of motor gasoline; 35,000 BPD of diesel fuel; and 30,000 BPD of jet fuel. In addition to motor fuels, the refinery would produce liquefied petroleum gas (LPG), sulfur, and petroleum coke.

WHAT ARE THE ACF REFINERY'S AMBIENT AIR QUALITY IMPACTS?

The site of the proposed refinery is located in a "clean air area" - one that has been designated as attainment or unclassifiable for all criteria pollutants under the Clean Air Act. An analysis of the ambient air quality impacts from the proposed refinery was performed, and this analysis demonstrated that the emissions would not cause or contribute to an exceedance of any applicable National Ambient Air Quality Standard, Prevention of Significant Deterioration increment, or Arizona Ambient Air Quality Guideline as they appear in the 1992 list.

In addition, ACF was required to conduct an analysis of the impairment to visibility, soils, and vegetation, and an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the new major source.

WHAT ARE THE ACF REFINERY'S EMISSIONS?

The maximum allowable emissions of criteria pollutants from the ACF refinery under the proposed permit would be 396 tons of oxides of nitrogen (NO_x), 251 tons of sulfur dioxide (SO_2), 251 tons of volatile organic compounds (VOC), 176 tons of particulate matter with a diameter smaller than 10 microns (PM_{10}), and 817 tons of carbon monoxide (CO) per year.

HOW DOES ACF COMPARE WITH OTHER PETROLEUM REFINERIES?

The design of the proposed refinery incorporates state-of-the-art technologies for reducing air emissions. Per unit of product, the allowable emissions from the proposed ACF refinery would be significantly less than the actual emissions from any other existing petroleum refinery and would be less than one-twentieth the emissions from some older (but still operating) refineries.

Atypical and unusually stringent emission control measures required of the ACF refinery include the following:

- A design that does not include a fluidized catalytic cracking unit;
- A prohibition on the use of hydrofluoric acid or sulfuric acid as catalysts in the alkylation process;
- A prohibition on the use of flares as pollution control devices for intermittent or routine, non-emergency hydrocarbon releases;
- A prohibition on the combustion of fuel oil in the refinery's boilers and heaters;
- The required use of ultra-low- NO_x -burners (ULNB) for control of NO_x emissions from all boilers and heaters, combined with selective catalytic reduction (SCR) for control of nearly three-fourths of the residual NO_x emissions;
- Sulfur removal from fuel gas to a level more than 75 percent lower than any other applicable regulation;

- The use of gas compression for recovery and in-process recycling of hydrocarbon vapors from selected storage tanks, and the use of floating roofs in tandem with a thermal oxidizer for control of VOC emissions from other selected storage tanks;
- The use of vapor recovery in tandem with thermal oxidizers for control of VOC emissions from gasoline loading into tank trucks and rail cars;
- The use of thermal oxidizers for control of VOC emissions from loading of diesel fuel and aviation jet fuel into tank trucks and rail cars; and
- A stringent program for monitoring, detecting, and repairing leaks at lower levels and with greater haste than required by any other applicable regulation.

HOW DID ADEQ DEVELOP THE TERMS OF THE PROPOSED PERMIT?

The proposed permit includes emission limits and standards and compliance demonstration requirements from numerous federal and state air quality regulations. The most important of these is the Prevention of Significant Deterioration (PSD) rule under Article 4 of A.A.C. Title 18, Chapter 2. As required by this rule, the Department made determinations of Best Available Control Technology (BACT) for each emission unit at the refinery and for each pollutant emitted. The process used by the Department in making its BACT determinations starts with a review of the control measures used by other similar sources, including other petroleum refineries nationwide. The Department then establishes emission limits based on the maximum achievable degree of emission reduction, taking into account technical feasibility, environmental impacts, economic impacts, energy impacts, and other costs. In the case of the ACF refinery, the Department's BACT determinations will ensure that this would be, by far, the lowest-emitting, fully-integrated petroleum refinery in the U.S.

Applicable federal regulations include eight New Source Performance Standards (NSPS) under 40 CFR part 60; five National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR parts 61 and 63; and the Compliance Assurance Monitoring rule under 40 CFR part 64. Other applicable state regulations include standards for nonpoint sources under Article 6 of A.A.C. Title 18, Chapter 2; standards for stationary sources under Article 7 of A.A.C. Title 18, Chapter 2; and standards for mobile sources under Article 8 of A.A.C. Title 18, Chapter 2.

HOW WILL ADEQ ENSURE THAT ACF COMPLIES WITH PERMIT REQUIREMENTS?

The proposed permit includes exceptionally stringent testing, monitoring, recordkeeping, and reporting

requirements to provide assurance of continuous compliance with all emission limits and standards. These requirements include installing and using 50 continuous emission monitoring systems (CEMS); conducting at least 69 annual emission tests (including performance tests and CEMS accuracy tests); monitoring and recording 133 different process and control device operating parameters; and reporting of the results of all required testing and monitoring.

The sampling, analysis, and recordkeeping requirements associated with hydrocarbon releases to the emergency flares, in particular, are more stringent than what is typically required of other petroleum refineries.

HOW DOES THE PUBLIC COMMENT PROCESS WORK?

A Public Notice will be published in the Arizona Republic on September 14, 2004, and on September 21, 2004. Additional notices will be published in the Yuma Daily Sun and the Bajo El Sol (Yuma) newspapers on September 17, 2004, and September 24, 2004. A public meeting and a public hearing will be held in each of the following cities: Wellton, Yuma, and Phoenix. During the public meetings, citizens will have the opportunity to hear a presentation and ask questions about the proposed permit. During the public comment period, and at the meetings and hearings, citizens are entitled to express any concerns that are relevant to the proposed permit. The public comment period will officially close on November 29, 2004. Therefore, all comments must be postmarked or hand-delivered no later than November 29, 2004.

WHERE CAN I GET MORE INFORMATION ?

Additional information on the public notice, and copies of the proposed permit and technical support document, can be obtained from the ADEQ website at: azdeq.gov/environ/air/permits/acf.html.

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We encourage you to be informed and involved in ADEQ activities. We need your involvement to help us protect our environment and public health.